Chapter 12

Adult Immunization

In 1995, pneumonia and influenza together ranked sixth among the 10 leading causes of death in the United States. Influenza is characterized by the sudden onset of fever, muscle pain, sore throat, and nonproductive cough. Pneumonia is an acute inflammation of the lung tissue characterized by shortness of breath, rapid heartbeat, rapid breathing, productive cough, fever, and chest pain. It is estimated that more than 20,000 Americans die each year from influenza-related illness and 40,000 die from pneumococcal infection. Pneumococcal pneumonia accounts for 25%-35% of all pneumonias leading to hospitalization resulting in 7,000 to 13,000 deaths per year in the United States. An estimated 90% of deaths caused by these illnesses occur among adults aged 65years or more.

Influenza vaccine can prevent illness in approximately 70-90% of healthy people aged less than 65 years. Among elderly people living outside of nursing homes or similar chronic-care facilities, influenza vaccine is 30-70% effective in preventing hospitalization for pneumonia and influenza. Among elderly persons residing in nursing homes, the vaccine can be 50-60% effective in preventing hospitalization or pneumonia and 80% effective in preventing death. However immunity to one strain of the influenza virus does not confer immunity to all other strains. Consequently, the strains included in the vaccination vary from year to year depending on those strains expected to be in circulation.

To determine the prevalence of vaccination coverage, BRFSS respondents were asked if they had an influenza vaccination in the past 12 months. They were also asked if they have ever had a pneumonia vaccination.

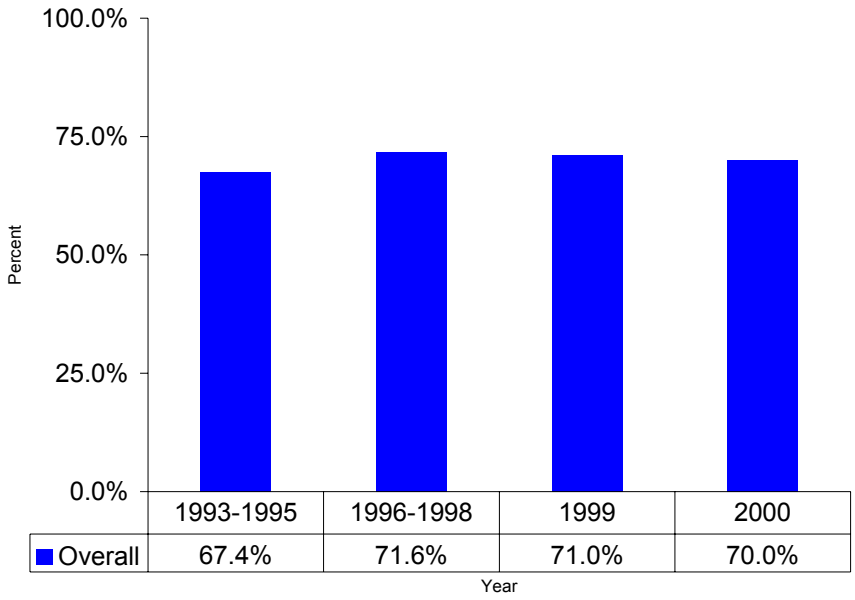
Had a Flu shot in past 12 month

Over two-thirds (70%, 95% CI, 65% - 75%) of adults, aged 65 and older, reported receiving influenza vaccination in the 2000 BRFSS survey.

Prevalence and Trend

Prevalence of flu shot coverage did not vary significantly by survey years. The proportion of respondents who reported receiving a flu shot within the past 12 months prior to the survey was 67.4 percent in 1993-1995, 71.6 percent in 1996-1998, and 71 percent in 1999 (Fig.93).

Fig.93: Had Flu Shot in Past 12 Months



No particular trends were observed in the percentage of people receiving the influenza vaccination coverage when demographic variables were taken into account.

In 2000, male respondents (72.7%), respondents with college diplomas (81.7%), respondents of age over 75 (77.4%), and adults with an income more than $50,000 (69.4%) showed a little higher flu shot rates than female respondents (67.2%), respondents “with some or less” high school education (68.8%), adults of aged 65-74 (61.8%) and income less than $10,000 (78.1%, Table 28).

Table 28: Had Flu Shot Over 65 +				
Year	**1993-1995**	**1996-1998**	**1999**	**2000**
Highest Grade Completed				
Some HS or Less	80%	62.2%	74%	68.8%
HS Grade or GED	69.1%	65.4%	60%	62.9%
Some College	52.5%	100%	76%	76.2%
College Grade	64.9%	75.5%	83%	81.7%
Sex				
Male	65.5%	74.5%	68%	72.7%
Female	68.9%	69.4%	73%	67.2%
Annual Household Income				
Less than $10,000	49.4%	50.9%	74.7%	78.1%
$10,000 - $15,000	55.9%	71.9%	65.9%	35%
$15,000 - $20,000	72.8%	66.5%	66%	63.4%
$20,000 - $25,000	85.7%	78.4%	88.3%	74.4%
$25,000 - $35,000	40.8%	87.7%	80%	80.8%
$35,000 - $50,000	84.2%	100%	96.1%	71.3%
$50,000+	73.5%	55.4%	74%	69.4%
Race				
White	67.4%	70.4%	71%	69.1%
Non-White	67.4%	100%	100%	75.8%
Age Group				
65-74	68.9%	77.6%	66.8%	61.8%
75+	65.8%	65.9%	74.9%	77.4%

Ever had Pneumonia Vaccination

About 58 percent (95% CI, 52.56% - 63.43%) of adults aged 65 and older in Lancaster County have had a pneumonia vaccination.

Prevalence and Trend

The proportion of adults who reported that they have received pneumonia vaccination almost doubled from the 1993-1995 to 1996-1998 periods; thereafter, the trend remained fairly stable (Fig.94).

Although men were more likely to report that they have received a pneumonia vaccination than women, the rates have increased substantially in both sexes since the 1993-1995 period (Fig.95). Vaccination rates for both sexes have doubled from 1993-1995 to 2000 (from 30% for men and 27.9% for women to 63.7% for men and 53.8% for women).

According to data from the 1999 and 2000 surveys, more adults of the age group 75 and greater had received pneumonia vaccination than adults aged 65-74 years. However, survey data for 1993-1995 (31% vs. 26.7%) and 1996-1998 (62.2% vs. 57.5%) reflected

the opposite trend (Fig.96). No trends were identified by other demographic variables (Table 29).

Fig.94: Ever Had Pneumonia Vaccination

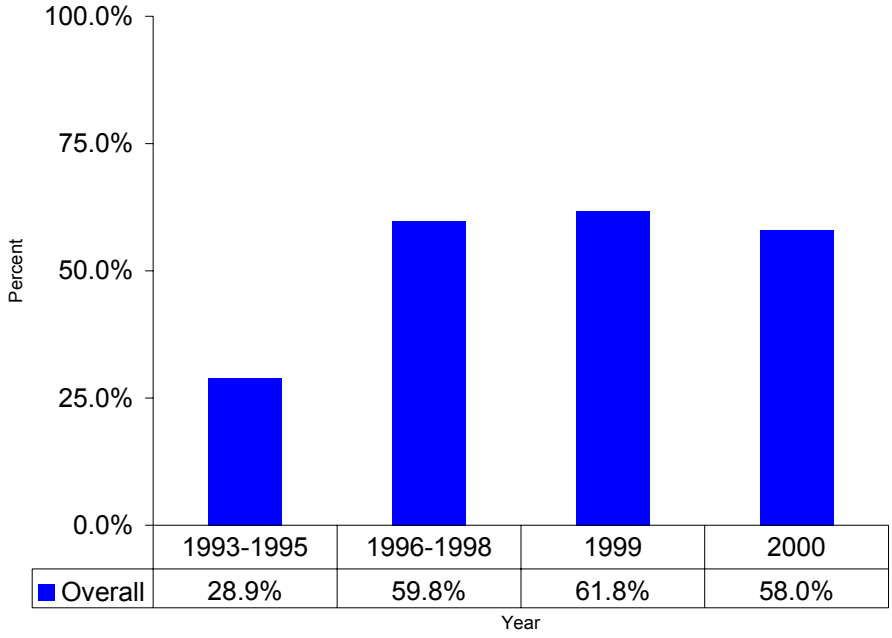


Fig.95: Ever Had Pneumonia Vaccination by Gender

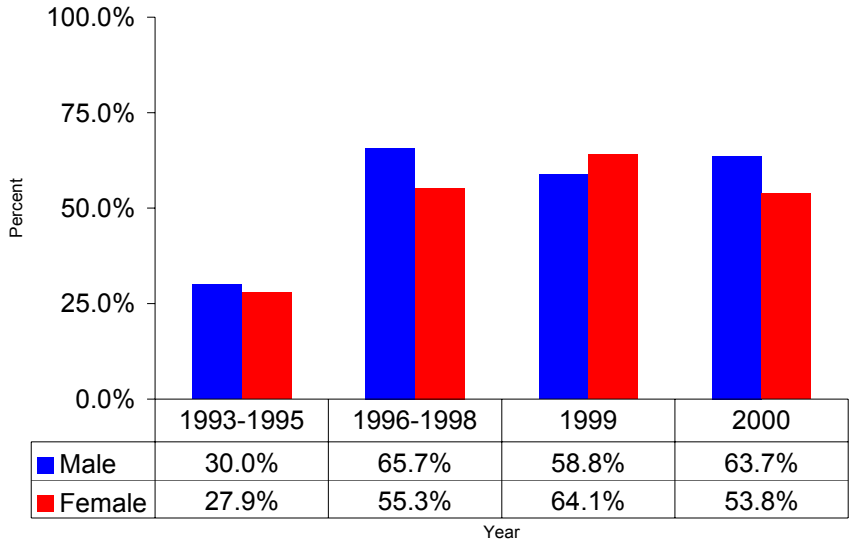


Fig 96: Ever Had Pneumonia Vaccination by Age Group

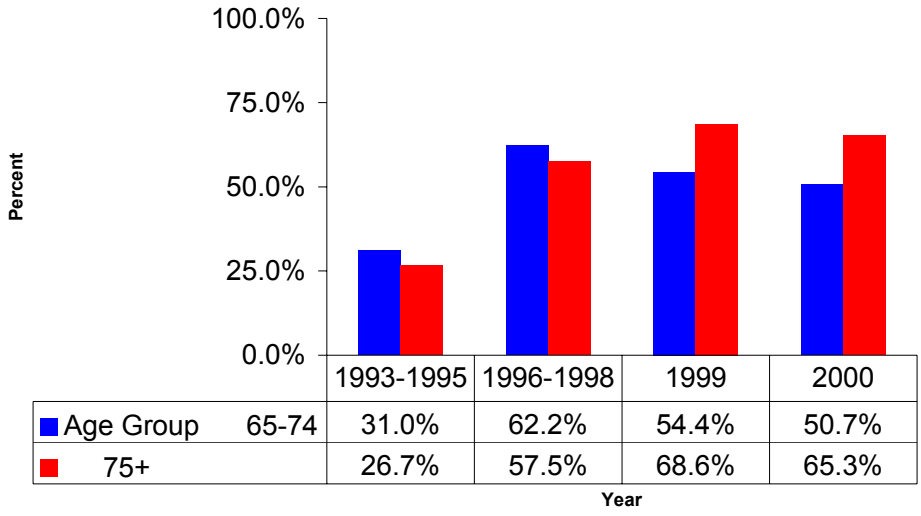


Table 29: Ever Had Pneumonia Vaccination

Year	1993-1995	1996-1998	1999	2000
Highest Grade Completed				
Some HS or Less	28.1%	44%	76.5%	54.1%
HS Grad or GED	42.1%	53.8%	56%	53.7%
Some College	11.6%	88.5%	60.4%	61.1%
College Grad	26.1%	67.4%	68.4%	68%
Annual Household Income				
Less than $10,000	12.8%	50.9%	74.7%	37.8%
$10,000 - $15,000	26.5%	61.8%	44.2%	54.3%
$15,000 - $20,000	31.9%	56.2%	62.5%	59.8%
$20,000 - $25,000	85.7%	68.8%	69.3%	66.6%
$25,000 - $35,000	20.4%	70.4%	61.6%	66.7%
$35,000 - $50,000	18.4%	100%	84.6%	56%
$50,000+	27.7%	37.3%	70%	56.7 %